

REMARKS

This amendment is responsive to the Office Action mailed December 30, 2008. Reconsideration of the present application is requested in view of the foregoing amendments and the following remarks.

Claim Amendment

Claim 1 has been amended to clarify the meaning of "pre-selected." Basis for the amendment is found in the specification as filed. No new matter has been introduced.

Claim Rejections

In the Office Action, Claims 1–4, 6–10 and 12–13 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,421,349 (hereafter "Grover"). Applicants respectfully traverse this rejection.

Grover does not disclose selecting a set of candidate cycles for forming into pre-configured cycles before allocating working paths and spare capacity in the mesh telecommunications network, the set of candidate cycles comprising a ranked sub-set of the multiple cycles, and allocating working paths and spare capacity in the mesh telecommunications network based on the set of candidate cycles.

Grover describes two different ways (IP-1 and IP-2) to connect the spare capacity in cycles.

In IP-1, the working capacity and spare capacity configuration is a given. See for example Col. 8, line 30: ". . . the network spare capacity is already given, the following formulation optimizes the PC design within the given set of existing spares . . .", and in general the discussion at Col. 8, lines 27 to Col. 9, line 8, where the working links and spare links are taken as fixed. IP-1 finds a connection of spare links that optimizes the configuration of protection cycles.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

In IP-2, while the spare capacity is permitted to be determined in the pre-configuration pattern, the working capacity is fixed in the same manner as in IP-2. Hence, in either case there is no "allocating working paths and spare capacity in the mesh telecommunications network based on the set of candidate cycles," as claimed in claim 1 of the present application.

As noted in the instant disclosure at paragraph 2 as filed, these formulations generate "large problem files that can be difficult to solve optimally . . . especially . . . when the jointly optimized problem is attempted." Accordingly, Grover proposes a non-optimal heuristic to find suitable pre-configured cycles of spare capacity.

In Grover, the non-optimal heuristic is a distributed algorithm (DCPC) for finding a set of pre-configured cycles. The Examiner refers to this DCPC algorithm (Col. 11, line 3) as providing allocation of working and spare capacity. However, in the DCPC algorithm, discussed in some detail at Col. 10, line 66 and following, the working and spare capacity is a given and so there is no "allocating working paths and spare capacity in the mesh telecommunications network based on the set of candidate cycles" as claimed in claim 1. Rather, in DCPC, a statelet traverses a network from node to node, acquiring, as it goes, information on the network (e.g., Col. 12, lines 35-55), until it reaches the node (originating node) it started from (Col. 13, lines 22-32), whereupon the information gained by the statelet as it traverses the network, and other statelets arriving at the originating node, is used to establish a restoration path or pre-configured cycle (Col. 13, lines 32-42). The DCPC algorithm thus takes a given set of working links and spare links and finds pre-configured cycles within those existing links. The design is a heuristic and is not optimum (Col. 11, lines 4-9).

In claim 1 of the present application, the candidate cycles are found first (selecting a set of candidate cycles for forming into pre-configured cycles before allocating working paths and spare capacity in the mesh telecommunications network) and then working capacity and spare capacity is allocated based on those candidate cycles (allocating working paths and spare

capacity in the mesh telecommunications network based on the set of candidate cycles). By selection of candidate cycles before allocating working and spare capacity, optimization of the routing may be more readily achieved (present disclosure as filed, end paragraph 2) and thus allowing re-optimization of p-cycle networks in service (present disclosure as filed, paragraph 9, line 3). Various methods may be used to select the candidate cycles.

In Grover, there is neither selection of candidate cycles before allocation of working and spare capacity, nor allocation of working capacity and spare capacity to those cycles, nor does Grover teach or suggest such an approach.

The Examiner indicated that the applicants' argument about the "temporal relationship" between the method steps was not in the claim. The applicants consider that the temporal relationship was in claim 1 (pre-selection of candidate cycles followed by allocation based on the candidate cycles). However, claim 1 has been amended to more clearly recite the temporal relationship.

Claim 1 is therefore patentable over Grover, and since all other claims are dependent on claim 1, all claims are patentable.

CONCLUSION

In view of the foregoing comments and amendments, applicants submit that all pending claims in the present application are in condition for allowance. In a telephone call of today's date, the undersigned counsel indicated to the Examiner that it might be helpful to conduct a brief telephone interview to discuss this case when the Examiner is ready to review this response. The Examiner agreed to call at that time. The Examiner may contact the undersigned counsel at 206-695-1712.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

Reconsideration and allowance of the pending claims is solicited.

Respectfully submitted,

CHRISTENSEN O'CONNOR
JOHNSON KINDNESS^{PLLC}

A handwritten signature in black ink, appearing to read "Kevan L. Morgan". The signature is fluid and cursive, with the first name "Kevan" and last name "Morgan" being clearly legible.

Kevan L. Morgan
Registration No. 42,015
Direct Dial No. 206.695.1712

KLM:kjb

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100